

WHAT IS CLAIMED IS:

1 1. A method of counteracting the lack of balance
2 of a rotary drive [for a reciprocable ledger guiding at
3 least one continuous rod which advances lengthwise in
4 a predetermined direction, at a predetermined speed and
5 along a predetermined path and is repeatedly severed
6 by an implement moving cyclically in and counter to said
7 direction and arranged to sever the rod while advancing
8 along a portion of said path, at said speed and in said
9 direction, comprising the steps of:

10 orbiting a ledger-reciprocating component of the
11 drive and a first counterpoise for the drive about a
12 first axis; and

13 orbiting a second counterpoise for the drive in
14 synchronism with the first counterpoise about a second
15 axis remote from the first axis.

1 2. The method of claim 1, wherein the drive in-
2 cludes a crank mechanism.

1 3. The method of claim 1, further comprising the
2 steps of establishing a torque-transmitting connection
3 between the drive and at least one further counterpoise
4 and orbiting the at least one further counterpoise in
5 synchronism with the first counterpoise.

1 4. The method of claim 3, wherein said orbiting
2 steps include orbiting the first, second and further coun-
3 terpoises about at least substantially parallel axes.

1 5. The method of claim 3, wherein said step of
2 orbiting the at least one further counterpoise includes
3 orbiting the at least one further counterpoise about
4 the first axis.

1 6. The method of claim 1, wherein said first and
2 second axes are parallel to each other.

1 7. The method of claim 1, wherein said step of
2 orbiting the second counterpoise includes transmitting
3 torque from the drive to the second counterpoise.

1 8. The method of claim 1, wherein said orbiting
2 steps include causing one of the counterpoises to orbit about
3 the respective axis in a clockwise direction and causing
4 the other counterpoise to orbit about the respective
5 axis in a counterclockwise direction.

1 9. The method of claim 1, wherein the rod is se-
2 lected from the group consisting of tubes, rods contain-
3 ing filter material for tobacco smoke and rods contain-
4 ing smokable material.

1 10. Apparatus for subdividing at least one
2 running rod into sections of predetermined length,
3 comprising:

4 an unbalanced drive including an output member
5 rotatable about a first axis;

6 a mobile ledger for the at least one rod, said
7 ledger being reciprocable back and forth in and counter
8 to a predetermined direction and receiving motion from
9 said output member; and

10 means for compensating for the lack of balance
11 of said drive, including

12 a first counterpoise arranged to orbit about
13 said first axis, and

14 a second counterpoise arranged to orbit about
15 a second axis in synchronism with said first coun-
16 terpoise, said second axis being spaced apart from
17 said first axis.

1 11. The apparatus of claim 10, further comprising
2 at least one severing implement arranged to reciprocate
3 with said ledger and to sever the at least one rod
4 during movement in said predetermined direction.

1 12. The apparatus of claim 10, wherein said
2 unbalanced drive includes a crank mechanism having a
3 crank arm coupling said ledger with said output member.

1 13. The apparatus of claim 12, wherein said crank
2 arm includes a first portion arranged to orbit about
3 said first axis and a second portion connected with said
4 ledger.

1 14. The apparatus of claim 13, wherein said
2 ledger includes at least one guide for the at least one
3 rod and a flexible carrier for said at least one guide.

1 15. The apparatus of claim 14, wherein said car-
2 rier comprises at least one leaf spring.

1 16. The apparatus of claim 10, further comprising
2 a shaft rotatable about said second axis and mounting
3 said second counterpoise, and means for rotating said
4 shaft in synchronism with said output member.

1 17. The apparatus of claim 16, wherein said means
2 for rotating said shaft comprises an endless flexible
3 torque transmitting element.

1 18. The apparatus of claim 17, wherein said
2 torque transmitting element comprises a V-belt.

1 19. The apparatus of claim 16, wherein said
2 output member is arranged to rotate in a first direction
3 and said means for rotating includes means for rotating
4 said shaft in a second direction counter to said first
5 direction.

1 20. The apparatus of claim 10, wherein said com-
2 pensating means further includes at least one further
3 counterpoise and means for orbiting said at least one
4 further counterpoise in synchronism with one of said
5 first and second counterpoises.

1 21. The apparatus of claim 20, wherein said means
2 for orbiting said at least one further counterpoise in-
3 cludes a kinematic connection between said output member
4 and said at least one further counterpoise.

1 22. The apparatus of claim 21, further comprising
2 an additional shaft eccentrically mounting said at least
3 one further counterpoise and rotatable by said output
4 member about a further axis spaced apart from said
5 second axis.

1 23. The apparatus of claim 22, wherein said fur-
2 ther axis coincides with one of said first and second
3 axes.

1 24. The apparatus of claim 20, wherein said at
2 least one further counterpoise is arranged to orbit
3 about said first axis and is spaced apart from said
4 first counterpoise in the direction of said first axis.

1 25. The apparatus of claim 24, wherein said at
2 least one further counterpoise is angularly offset
3 relative to said first counterpoise circumferentially
4 of said first axis.

1 26. The apparatus of claim 10, wherein said first
2 and second counterpoises respectively have first and
3 second centers of gravity, said centers of gravity being
4 disposed in a common plane.

1 27. The apparatus of claim 26, wherein said
2 common plane is an at least substantially vertical
3 plane.

1 28. The apparatus of claim 26, wherein said
2 ledger comprises two at least substantially tubular
3 guides for two discrete rods and a common flexible
4 carrier for said guides.